

ABSTRACT

A battery protection circuit is provided that includes a safety circuit and an overpower circuit. The safety circuit monitors the voltage and current of at least one rechargeable cell within the battery pack, and disconnects the cell(s) from the external terminals of the battery pack when either the voltage becomes too high or low, or when excessive current is being drawn from the battery pack. The overpower circuit monitors the power being delivered to or sourced from the battery pack to the load. The overpower circuit actuates when the power exceeds a predetermined threshold, thereby simulating an overcurrent condition in the safety circuit. The overcurrent condition causes a disconnect means, like a transistor, to open, thereby disconnecting the cell(s) from the external terminals. The battery protection circuit then latches in this disconnected state until a load is removed from the terminals of the battery pack.